

What is claimed is:

1. A system for mounting and dismounting at least two items, comprising:

(a) a first piece and a second piece, said first piece for being affixed to a first item, and said second piece for being affixed to a second item;

5 (b) said first piece having a top and a bottom, left and right sides, and a front and rear surface, said front surface of said first piece having a first protrusion extending longitudinally from said top of said first piece to a spaced distance from said bottom of said first piece along one side, said front surface having an internally disposed first cavity extending longitudinally from said top to said bottom of said first piece along a side  
10 opposite said first protrusion;

(c) said second piece having a top and bottom, left and right sides, and a front and rear surface, said front surface of said second piece having a cooperatively matching second protrusion extending longitudinally from said top of said second piece to a spaced distance from said bottom of said second piece along one side, said second protrusion  
15 being dimensioned for sliding within said first cavity of said first piece, and said front surface of said second piece having a cooperatively matching second cavity for accepting said first protrusion in a sliding relationship extending longitudinally from said top to said bottom of said second piece along a side opposite said second protrusion;

(d) said first and second pieces having cooperative means for automatically positioning and automatically locking said first and second pieces together, so that when said first piece  
20 is affixed to said first item, and when said second piece is affixed to said second item an operator can cause said first item to be mounted onto said second item by sliding said first cavity on said first piece over said cooperatively dimensioned second protrusion on said second piece while simultaneously sliding said first protrusion on said first piece into said  
25 cooperatively dimensioned second cavity on said second piece, said first and second piece automatic positioning means and automatic locking means thereby connecting said first and second pieces together in a secure, mounting relationship.

2. The system according to claim 1 wherein said first and second protrusions on said first and second pieces are partially circular protrusions extending outwards from said  
30 respective front sections and connected to said front sections via respective extension members, and wherein said first and second cavities are each partially circular and interconnected along their respective lengths to said front surfaces via rectangular cut-outs in each of said front surfaces.

3. The system according to claim 1 wherein said automatic locking means in said first and second pieces includes a spring loaded, indexing plunger mechanism having a displaceable handle affixed to said first piece along a longitudinal length of said first piece, said plunger mechanism having a spring-biased plunger portion extending laterally into said first cavity; and, a beveled top surface on said second protrusion, said second protrusion further having an indent immediately below said beveled surface, so that when said operator mounts said first piece onto said second piece said spring-biased plunger portion of said plunger mechanism contacts said top beveled surface of said second protrusion, thereby forcing said spring-biased plunger portion back into said plunger mechanism until said indent in said second protrusion and said spring-biased plunger portion are in axial alignment, said spring-biased plunger portion being dimensioned so as to slide into said indent, said spring-biased plunger portion then being urged into an engagement position with said indent by said spring loaded plunger mechanism, thereby affirmatively locking said first piece and said second piece in said secure, mounting relationship.
4. The system according to claim 3 wherein said automatic positioning means in said first and second pieces is a plug affixed at a bottom area of said second cavity in said second piece, and a cooperatively dimensioned first protrusion having a predetermined length, so that when said operator mounts said first piece onto said second piece said first protrusion is caused to stop in said second cavity at a position at which said indent in said second protrusion is in axial alignment with said spring-biased plunger portion of said spring loaded plunger mechanism, thereby automatically positioning said first piece and said second piece for said automatic locking of said first piece and said second piece in said secure, mounting relationship.
5. The system according to claim 3 wherein after said automatic locking of said first piece to said second piece, said two pieces can be dismounted by an operator by displacing said handle so as to disengage said plunger portion from said engagement position, and then lifting said first piece free of said second piece.
6. The system according to claim 1 wherein said first piece is connected to said first item by at least one band-clamp, and said second piece is connected to said second item by at least one band-clamp.
7. The system according to claim 6 wherein said first piece and said second piece have retaining grooves dimensioned to accommodate a longitudinal width and thickness of a securing band portion of said at least one band-clamp.

8. The system according to claim 1 wherein said first piece and said second piece are fabricated from a longer piece of extruded aluminum.
9. The system according to claim 1 wherein said rear surface of said first piece and said rear surface of said second piece have partially arcuate surfaces of a predetermined radii  
5 substantially matching cylindrical surfaces of items for attachment, such as air tanks.
10. The system according to claim 9 wherein at least one of said first piece and second piece have two different partially arcuate surfaces on said rear surfaces of predetermined radii substantially matching cylindrical surfaces of two different items for attachment, such as two tanks of differing diameters.
- 10 11. The system according to claim 9 wherein at least one of said first pieces and said second pieces has two opposed partially arcuate surface portions extending a complete longitudinal length of said rear surface of predetermined radii substantially matching cylindrical surfaces of two tanks for attachment, said two opposed partially arcuate surfaces being angled towards one another so as to permit a cooperative mounting of said  
15 first or second protrusions and said first or second cavities on said front surfaces with a front surface of another first or second piece.
12. The system according to claim 1 wherein said rear surface of said first piece and/or said rear surface of said second piece has at least a partial flat surface for attachment to items having a flat surface.
- 20 13. The system according to claim 12 wherein said front surface and said rear surface have at least one confluent aperture therethrough for allowing a nut and bolt combination to secure said first piece and/or said second piece to said flat surface of said item.
14. The system according to claim 1 wherein said first piece is affixed to a pony air tank.
15. The system according to claim 1 wherein said second piece is affixed to a main air tank.
- 25 16. The system according to claim 13, further comprising a pair of first pieces wherein one of said pair of first pieces has a rear surface having a partially flat surface, and the other of said pair of first pieces having a partially arcuate rear surface, and a pair of second pieces each having a pair of partially arcuate rear surfaces, each one of said second pieces being attached to a main air tank via band-claims, said partially arcuate rear surfaced first piece  
30 being attached to a pony air tank via band-claims, said partially flat rear surfaced first piece being attached to a buoyancy compensator via a nut and bolt combination, so that said operator can lift said partially flat rear surfaced first piece on said buoyancy compensator over one of said pair of second pieces on said main air tank and mount said buoyancy compensator to said main air tank, and said operator can lift said partially

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arcuate rear surfaced first piece over a second one of said pair of second pieces on said main air tank and mount said pony air tank to said main air tank, thereby creating a secure, mounting relationship between said buoyancy compensator, said main air tank, and said pony air tank.

- 5 17. The system according to claim 13 wherein said first piece is affixed to a cylindrically shaped fire extinguisher, and said second piece is affixed to a wall, so that said operator can lift said first piece on said fire extinguisher over said second piece on said wall and thereby mount said fire extinguisher to said wall.

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